GRAPHIC EQUALIZER

GE-940

SERVICE MANUAL

KENWOOD

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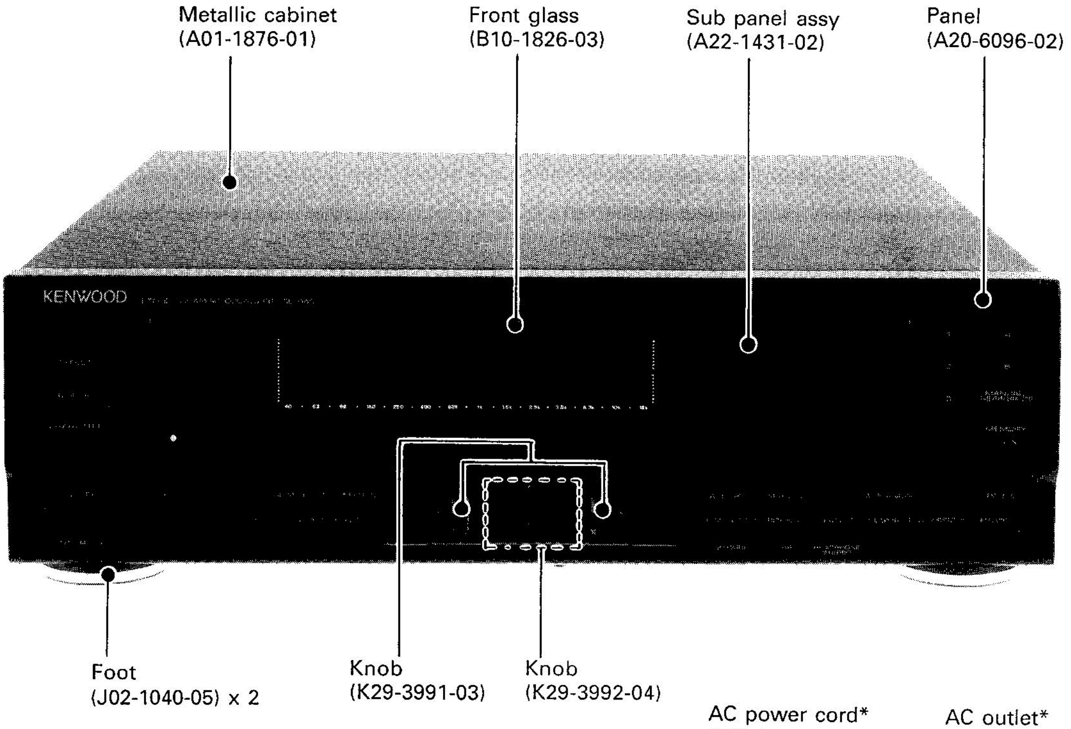
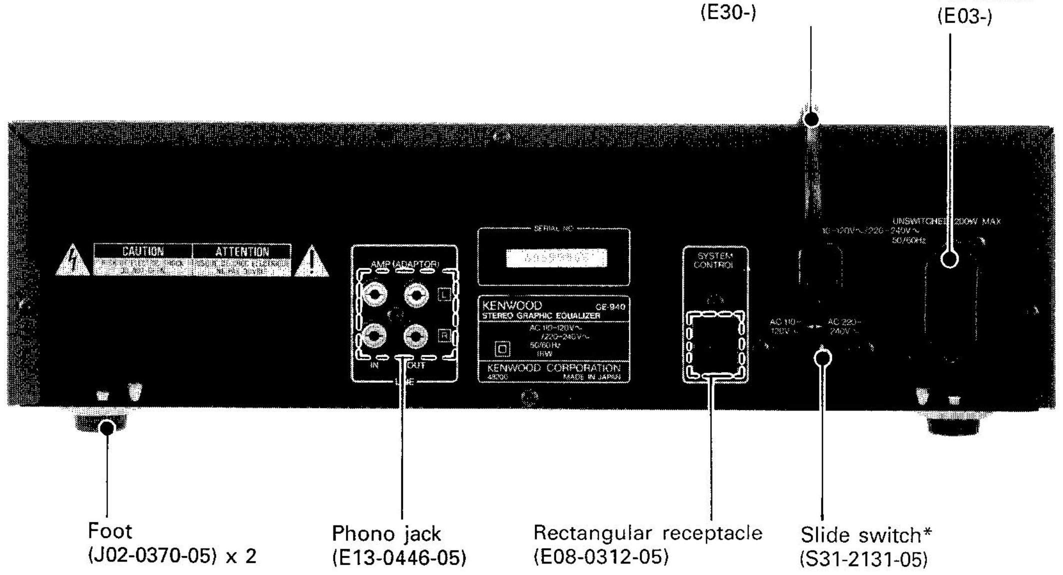
B51-4206-00 (O) 1953


Metallic cabinet
(A01-1876-01)
Front glass
(B10-1826-03)
Sub panel assy
(A22-1431-02)
Panel
(A20-6096-02)
KENWOOD
Foot
(J02-1040-05) x 2
Knob
(K29-3991-03)
Knob
(K29-3992-04)


AC power cord*
(E30-)
AC outlet*
(E03-)
CAUTION
ATTENTION
AMP (ADAPTOR)
IN
OUT
SERIAL NO.
KENWOOD
GE-940
STEREO GRAPHIC EQUALIZER
KENWOOD CORPORATION
MADE IN JAPAN
SYSTEM CONTROL
UNSWITCHED 200W MAX
Foot
(J02-0370-05) x 2
Phono jack
(E13-0446-05)
Rectangular receptacle
(E08-0312-05)
Slide switch*
(S31-2131-05)

*** Refer to parts list on page 24.**

CONTENTS / ACCESSORIES

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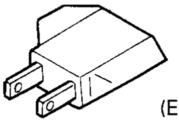
SPECIFICATIONS .... BACK COVER

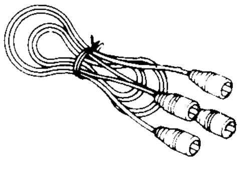
Accessories

AC plug adaptor 1
(Except for some areas)
For the unit with a European AC plug in areas other than Europe.



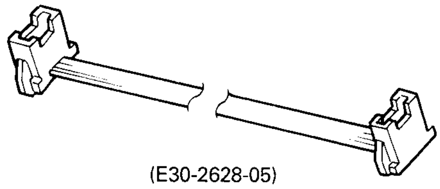
(E03-0115-05)

Audio cord 2



(E30-0505-05)

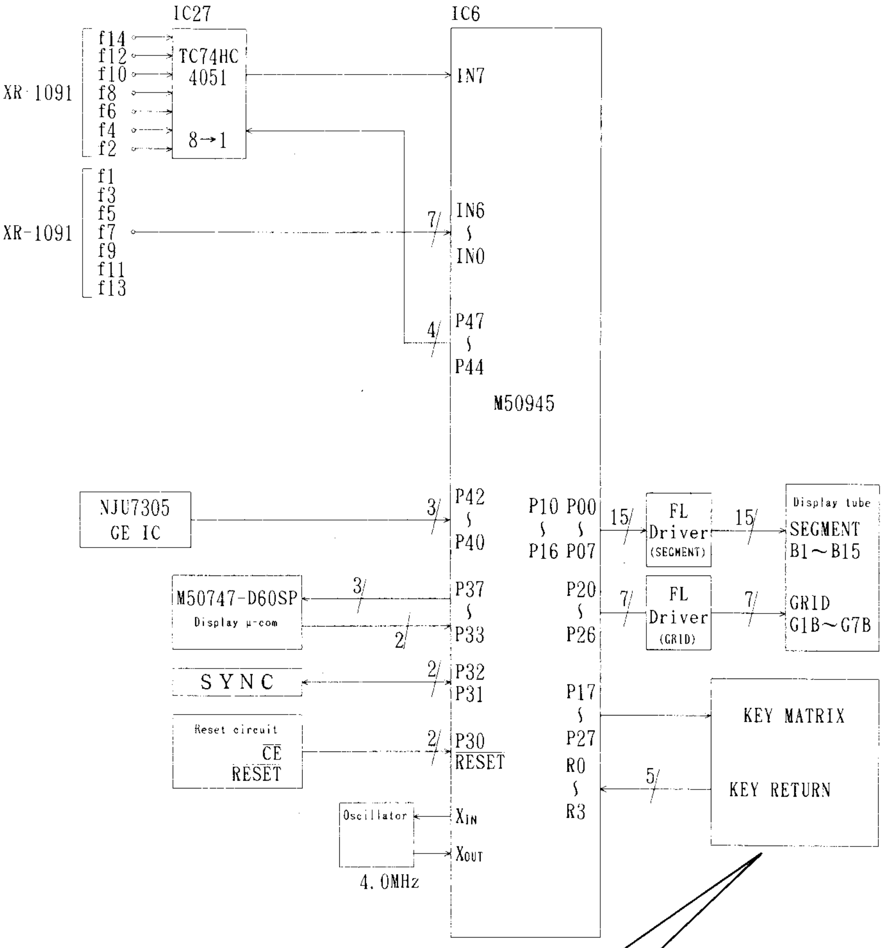
System control cord 1



(E30-2628-05)

CIRCUIT DESCRIPTION

1. Microprocessor Block Diagram and Key Matrix

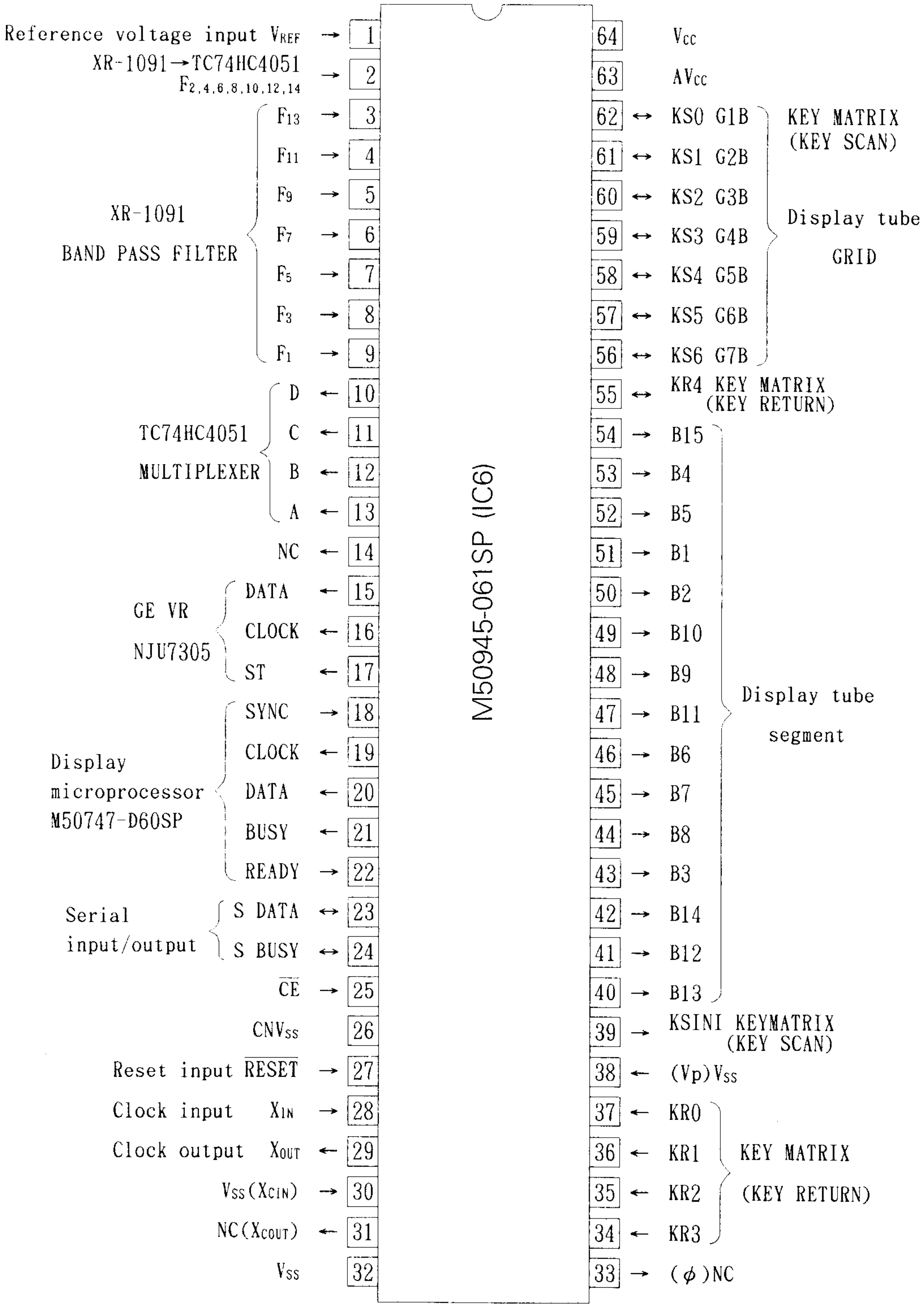

IC27
IC6
f14
f12
f10
f8
f6
f4
f2
XR-1091
TC74HC
4051
8→1
IN7
f1
f3
f5
f7
f9
f11
f13
XR-1091
7/
IN6
IN0
4/
P47
P44
M50945
NJU7305
GE IC
3/
P42
P40
P10 P00
P16 P07
15/
FL
Driver
(SEGMENT)
15/
Display tube
SEGMENT
B1～B15
M50747-D60SP
Display μ-com
3/
2/
P37
P33
P20
P26
7/
FL
Driver
(GRID)
7/
GRID
G1B～G7B
SYNC
2/
P32
P31
P17
P27
KEY MATRIX
Reset circuit
CE
RESET
2/
P30
RESET
R0
R3
5/
KEY RETURN
Oscillator
XIN
XOUT
4.0MHz

	KR0	KR1	KR2	KR3	KR4		
KS0	△f+	▽f-	WIDE/ NARROW	F3	AI LINK	$P2_0$	62
KS1	△L+	▽L-	GRAPHIC/ PARAMETRIC	F2	–	$P2_1$	61
KS2	G2 ROCK CAR ST.	G3 JAZZ H. P. ST.	–	F1	AI AUTO	$P2_2$	60
KS3	G1 POPULAR BYPASS	G4 FUSION	G5 CLASSIC	G6 MOVIE	AI MANUAL PATTERN	$P2_3$	59
KS4	DISPLAY	CHARACTER	–	PAUSE	EQ EFFECT	$P2_4$	58
KS5	MR4	MR3	MR2	MR1	MR5	$P2_5$	57
KS6	FLAT	MEMORY	M/R	–	POWER	$P2_6$	56
KS7	–	AUREX/ ROXY	CONCEPT/ ROXY	OTHERS/ JTYPE	–	$P1_7$	39
	R0	R1	R2	R3	$P2_7$		
	37	36	35	34	55		

CIRCUIT DESCRIPTION

2. Main Microprocessor : M50945-061SP (X14-2930-00 : IC6)

2-1. Terminal connection diagram


Reference voltage input VREF → 1
XR-1091→TC74HC4051 F2,4,6,8,10,12,14 → 2
XR-1091 BAND PASS FILTER
F13 → 3
F11 → 4
F9 → 5
F7 → 6
F5 → 7
F3 → 8
F1 → 9
TC74HC4051 MULTIPLEXER
D ← 10
C ← 11
B ← 12
A ← 13
NC ← 14
GE VR NJU7305
DATA ← 15
CLOCK ← 16
ST ← 17
Display microprocessor M50747-D60SP
SYNC → 18
CLOCK ← 19
DATA ← 20
BUSY ← 21
READY → 22
Serial input/output
S DATA ↔ 23
S BUSY ↔ 24
CE → 25
CNVSS 26
Reset input RESET → 27
Clock input XIN → 28
Clock output XOUT ← 29
VSS(XCIN) → 30
NC(XCOUT) ← 31
VSS 32
M50945-061SP (IC6)
64 VCC
63 AVCC
62 ↔ KS0 G1B
61 ↔ KS1 G2B
60 ↔ KS2 G3B
59 ↔ KS3 G4B
58 ↔ KS4 G5B
57 ↔ KS5 G6B
56 ↔ KS6 G7B
KEY MATRIX (KEY SCAN)
Display tube GRID
55 ↔ KR4 KEY MATRIX (KEY RETURN)
54 → B15
53 → B4
52 → B5
51 → B1
50 → B2
49 → B10
48 → B9
47 → B11
46 → B6
45 → B7
44 → B8
43 → B3
42 → B14
41 → B12
40 → B13
Display tube segment
39 → KSINI KEYMATRIX (KEY SCAN)
38 ← (Vp)VSS
37 ← KR0
36 ← KR1
35 ← KR2
34 ← KR3
KEY MATRIX (KEY RETURN)
33 → (φ)NC

CIRCUIT DESCRIPTION

2-2. Description of terminals

Pin No.	Pin Name	I/O	Name	Description
1	VREF	–	VREF	Reference voltage input for A/D converter.
2	IN7	I	F8~F14 AMP VR	Analog signal input for 1kHz~16kHz and AMP VR position detection. (For inputting signal coming in by way of Multiplexer TC74HC4051.)
3	IN6	I	F6	10kHz analog signal input. (For inputting signals coming in directly from filter circuit.)
4	IN6	I	F5	3.9kHz analog signal input. (For inputting signals coming in directly from filter circuit.)
5	IN6	I	F4	1.5kHz analog signal input. (For inputting signals coming in directly from filter circuit.)
6	IN6	I	F3	625Hz analog signal input. (For inputting signals coming in directly from filter circuit.)
7	IN6	I	F2	250Hz analog signal input. (For inputting signals coming in directly from filter circuit.)
8	IN6	I	F1	98Hz analog signal input. (For inputting signals coming in directly from filter circuit.)
9	IN6	I	F0	40Hz analog signal input. (For inputting signals coming in directly from filter circuit.)
10~13	P47~P44	O	D~A	Control signal output for Multiplexer TC74HC4051.
14	P43	O	NC	Unused.
15	P42	O	DATA	Output of NJU7305 CONTROL DATA signals for electronic VR of graphic equalizer.
16	P41	O	CLOCK	Output of NJU7305 CONTROL CLOCK signals for electronic VR of graphic equalizer.
17	P40	O	ST	Output of NJU7305 CONTROL ST signals for electronic VR of graphic equalizer.
18	P37	I	SYNC	Input for transfer display data indication signals. H : DISPLAY MODE data L : LEVEL or POINT data
19	P36 (CLK)	O	CLOCK	CLOCK signal output for DISPLAY data transfer.
20	P35 (SOUT)	O	DATA	DATA signal output for display.
21	P34	O	BUSY	Output for DISPLAY DATA TRANSFERRING signals. H : Data transferring L : Others
22	P33	I	READY	Input for DISPLAY DATA TRANSFERRABLE signal. H : Not transferrable L : Transferrable
23	P32	I/O	SDATA	Input/Output for SYSTEM SERIAL DATA signal.
24	P31	I/O	SBUSY	Input/Output for SYSTEM SERIAL BUSY signal.
25	P30	I	CE	BACK UP detection. H : Others L : Backing up
26	CNVSS	–	VSS	Unused.
27	RESET	I	RESET	RESET signal detection. H : Others L : Reset
28	XIN	I	XIN	System clock input (4.0MHz).
29	XOUT	O	XOUT	System clock output.
30	XCIN	I	VSS	Unused. (Clock input terminal for timer.)
31	XCOUT	O	NC	Unused. (Clock output terminal for timer.)
32	VSS	–		GND.
33	ø	O	NC	Unused. (Output terminal for system clock 1/4 divided frequencies.)
34~37	R3~R0	I	R3~R0	KEY RETURN signal input.
38	VP	–	VSS	Pull down input.
39	P17	O	KSINI	Destination switch SCAN output. H : Reset L : Normal
40~54	P16~P00	O	B1~B15	Output for DISPLAY TUBE SEGMENT DRIVE. H : OFF L : ON
55	P27	I	KR4	KEY RETURN signal input. H : OFF L : ON
56~62	P26~P20	O	KS6~KS0	KEY SCAN signal. Output for DISPLAY TUBE GRID DRIVE. H : OFF L : ON
63	AVCC	–	AVCC	Power supply for A/D converter (+5V).
64	VCC	–	VCC	Power supply for microprocessor (+5V).

CIRCUIT DESCRIPTION

3. Data of MEMORY EQ CURVE

(1) REFERENCE ×5
SOFT
CLEAR
HEAVY
SCALE
NR

(2) REFERENCE II ×5 (Double-speed REC curve)
SOFT
CLEAR
HEAVY
SCALE
NR

(3) MANUAL ×5 (RESET curve at initialized)
DSP PRESENCE MODE ARENA : POPULAR or ROCK CONCERT
DSP PRESENCE MODE STADIUM : POPULAR or ROCK CONCERT
DSP PRESENCE MODE ARENA or STADIUM or CHURCH : CLASSIC CONCERT
CAR STEREO
HEAD PHONE STEREO

(4) AI AUTO ×25

(I)
1(1):L1-H1
2(2):L1-H2
3(3):L1-H3
4(4):L1-H4
5(5):L1-H5

(II)
6(6):L2-H1
7(7):L2-H2
8(8):L2-H3
9(9):L2-H4
10(0):L2-H5

(III)
11(a):L3-H1
12(b):L3-H2
13(c):L3-H3
14(d):L3-H4
15(e):L3-H5

(IV)
16(f):L4-H1
17(g):L4-H2
18(h):L4-H3
19(i):L4-H4
20(j):L4-H5

(V)
21(k):L5-H1
22(l):L5-H2
23(m):L5-H3
24(n):L5-H4
25(o):L5-H5

(5) AI MANUAL 6×5

(I) POPULAR
SOFT
CLEAR
BASIS
SCALE1 (HEAVY)
SCALE2

(II) ROCK
SOFT
CLEAR
BASIS
SCALE1 (HEAVY)
SCALE2

(III) JAZZ
SOFT
CLEAR
BASIS
SCALE1 (HEAVY)
SCALE2

(IV) CLASSIC
SOFT
CLEAR
BASIS
SCALE1 (HEAVY)
SCALE2

(V) FUSION
SOFT
CLEAR
BASIS
SCALE1 (HEAVY)
SCALE2

(VI) MOVIE
SOFT
CLEAR
BASIS
SCALE1 (HEAVY)
SCALE2

(6) AI LINK ×6
ARENA
JAZZ CLUB
STADIUM
DISCO
CHURCH
MOVIE

(7) AI TIMER1 ×2
STEP1
STEP2

CIRCUIT DESCRIPTION

4. Test Mode

4-1. Test mode with key switch

- **Setting method**

1. Press the M/R key switch, connect the AC plug to an outlet.
2. Pressing the FLAT key switch, connect the AC plug to an outlet.

- **Contents of operation**

1-1. If the test mode is selected, the short check of the segment terminals is indicated. If any key switch is pressed, the device returns to the normal indication but it is kept in the test mode.

1-2. If the short check of the segment terminals is indicated, the bars of all the bands light up by five segments, and the lighting bars move up at the interval of 256msec. The 14-segment indicator and mode indicator on the right continue lighting in order of B15, B4, B5, B1, B2, B10, B9, B11, B6, B7, B8, B3, B14, B12, B13, B15, B4 ...

1-3. If the AI MANUAL key switch is pressed, "AI MANU" is indicated, then the device goes to the genre section mode without performing sampling operation.

1-4. Set the contents of the MANUAL PRESET MEMORY as follows.
M1 : FLAT (ALL 0dB)
M2 : ALL MAX (ALL +12dB)
M3 : ALL MIN (ALL −12dB)

1-5. The EQ LEVEL UP/DOWN operation is set to three points of +12dB, 0dB, and −12dB at all the frequencies.

2-1. If the test mode is selected, all the indicator lamps light up.

4-2. Resetting method of test mode and initialization

In either the key switch test mode or the serial test mode, if the AC plug is disconnected from the outlet and connected again to the outlet, the microprocessor is initialized and the power is turned off. At the same time, the test mode is reset.

5. Explanation of Operation of AI LINK

5-1. Bar indicator

After "AI LINK" is indicated for four seconds, the device returns to the last indication. If the DSP PRESENCE MODE is turned off, the PRESENCE MODE curve is indicated and the device returns to the last indication.

5-2. 14-seg. indicator

"DSP PRESENCE MODE" is indicated.

5-3. Mode indicator

When AI LINK is turned on :

The mode indicator normally lights up.

If the code of DSP PRESENCE MODE is received during the AI TIMER 1, CCRS, REC, AI AUTO, or AI MANUAL operation, the mode indicator flashes. It lights up when the AI TIMER 1, CCRS, DEMO, REC, AI AUTO, and AI MANUAL operation is completed.

While AI LINK is turned on :

The same indication as the time when the AI LINK is turned on is performed.

While AI LINK is turned off :

The mode indicator goes off.

5-4. Operation

If the DSP PRESENCE code is sent from AMP while the AI LINK is turned on and if the required presence mode is different from the present one, the EQ curve for the mode of the sent code is called up. In case of the DSP OFF code, however, the EQ curve just before entering the AI LINK mode is called up.

If DSP PRESENCE code is received during the AI TIMER 1, CCRS, DEMO, REC, AI AUTO, or AI MANUAL operation, the EQ curve of the DSP PRESENCE mode is not called up immediately, but called up after the operation has been completed. At this time, the AI LINK indicator (MODE indicator) continue flashing after the DSO PRESENCE code is received until the EQ curve is called up.

If the AI LINK is turned off, the device returns to the last indication without changing the EQ curve.

If the AI LINK switch is pressed, the AI LINK is turned on and off alternately.

If the EQ curve is changed in the AI LINK mode (including the case that the f UP/DOWN switch is pressed), the AI LINK mode is turned off.

If the AI AUTO switch is pressed when the AI AUTO indication is turned off in the AI LINK mode, or if the AI MANUAL switch is pressed when the AI MANUAL indication is turned off, the curve just before the AI LINK mode was selected is called up and the AI LINK mode is turned off.

The AI LINK mode is backed up.

DSP PRESENCE mode

0 : DSP OFF
1 : ARENA
2 : JAZZ CLUB
3 : STADIUM
4 : DISCO
5 : CHURCH
6 : MOVIE

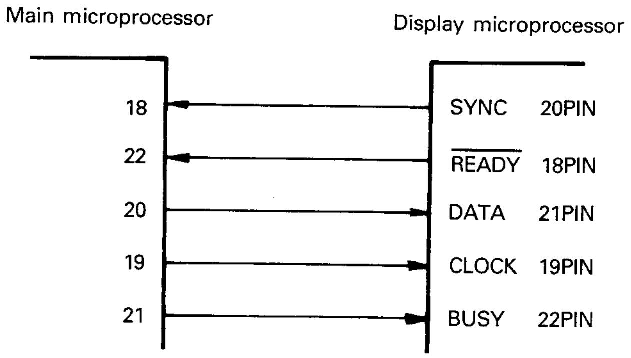
CIRCUIT DESCRIPTION

6. Transfer Method

Data are transferred by the unit of 8-bits in the LSB first mode.

- SYNC is raised at the header to clearly show the divisions of the transferred data (including the header).
- READY is raised at the head of each 8-bit datum to clearly shows each division of the data.
- If any mistake is made in the transfer of data, the highest priority is given to SYNC to modify the synchronization of data.
- Data are taken in at the rise of the clock.
- BUSY is raised when data are transferred.
- Transfer is started when READY is raised.
- DATA are sent with LSB at head.

6-1. Connection

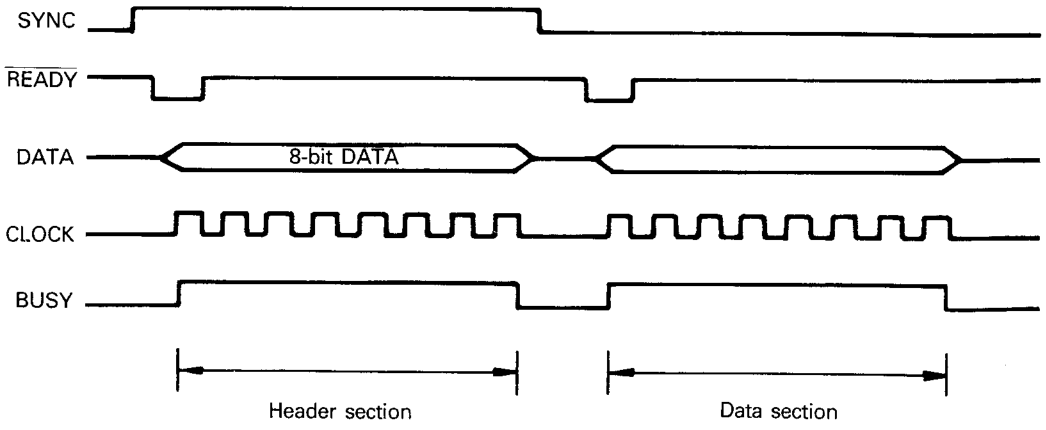

Main microprocessor
Display microprocessor
18
22
20
19
21
SYNC 20PIN
READY 18PIN
DATA 21PIN
CLOCK 19PIN
BUSY 22PIN

6-2. Transfer method

First, the display microprocessor notifies the transmission of the header to the main microprocessor by setting SYNC to "H". Then, it set READY to "L" to notify that it can receive data.

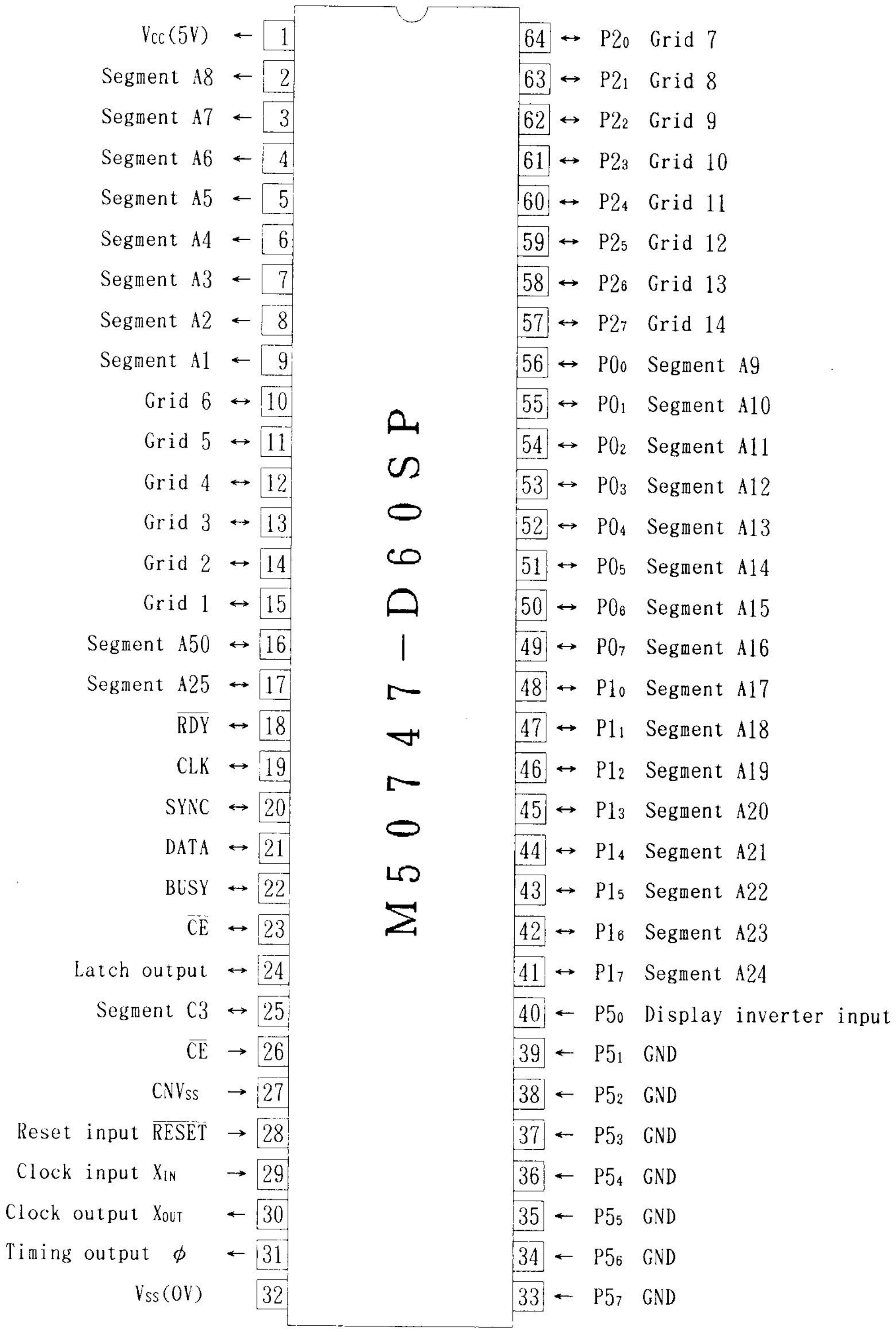
When the READY is set to "L", the main microprocessor checks SYNC. If SYNC is "H", the main microprocessor sends the header signal to the displayr microprocessor (READY returns to "H" at the first rise of the clock).

If the display microprocessor receives an 8-bit data and confirms that it is a header, it turns SYNC to "L" and also turns READY to "L" again, then demands the data from the main microprocessor.


SYNC
READY
DATA
8-bit DATA
CLOCK
BUSY
Header section
Data section

7. Display Microprocessor : M50747-D60SP (X14-2930-00 : IC5)

7-1. Terminal connection diagram


M50747-D60SP
V_{CC}(5V) ← 1
Segment A8 ← 2
Segment A7 ← 3
Segment A6 ← 4
Segment A5 ← 5
Segment A4 ← 6
Segment A3 ← 7
Segment A2 ← 8
Segment A1 ← 9
Grid 6 ↔ 10
Grid 5 ↔ 11
Grid 4 ↔ 12
Grid 3 ↔ 13
Grid 2 ↔ 14
Grid 1 ↔ 15
Segment A50 ↔ 16
Segment A25 ↔ 17
$\overline{\text{RDY}}$ ↔ 18
CLK ↔ 19
SYNC ↔ 20
DATA ↔ 21
BUSY ↔ 22
$\overline{\text{CE}}$ ↔ 23
Latch output ↔ 24
Segment C3 ↔ 25
$\overline{\text{CE}}$ → 26
CNV_{SS} → 27
Reset input $\overline{\text{RESET}}$ → 28
Clock input X_{IN} → 29
Clock output X_{OUT} ← 30
Timing output ϕ ← 31
V_{SS}(0V) 32
64 ↔ $P2_0$ Grid 7
63 ↔ $P2_1$ Grid 8
62 ↔ $P2_2$ Grid 9
61 ↔ $P2_3$ Grid 10
60 ↔ $P2_4$ Grid 11
59 ↔ $P2_5$ Grid 12
58 ↔ $P2_6$ Grid 13
57 ↔ $P2_7$ Grid 14
56 ↔ $P0_0$ Segment A9
55 ↔ $P0_1$ Segment A10
54 ↔ $P0_2$ Segment A11
53 ↔ $P0_3$ Segment A12
52 ↔ $P0_4$ Segment A13
51 ↔ $P0_5$ Segment A14
50 ↔ $P0_6$ Segment A15
49 ↔ $P0_7$ Segment A16
48 ↔ $P1_0$ Segment A17
47 ↔ $P1_1$ Segment A18
46 ↔ $P1_2$ Segment A19
45 ↔ $P1_3$ Segment A20
44 ↔ $P1_4$ Segment A21
43 ↔ $P1_5$ Segment A22
42 ↔ $P1_6$ Segment A23
41 ↔ $P1_7$ Segment A24
40 ← $P5_0$ Display inverter input
39 ← $P5_1$ GND
38 ← $P5_2$ GND
37 ← $P5_3$ GND
36 ← $P5_4$ GND
35 ← $P5_5$ GND
34 ← $P5_6$ GND
33 ← $P5_7$ GND

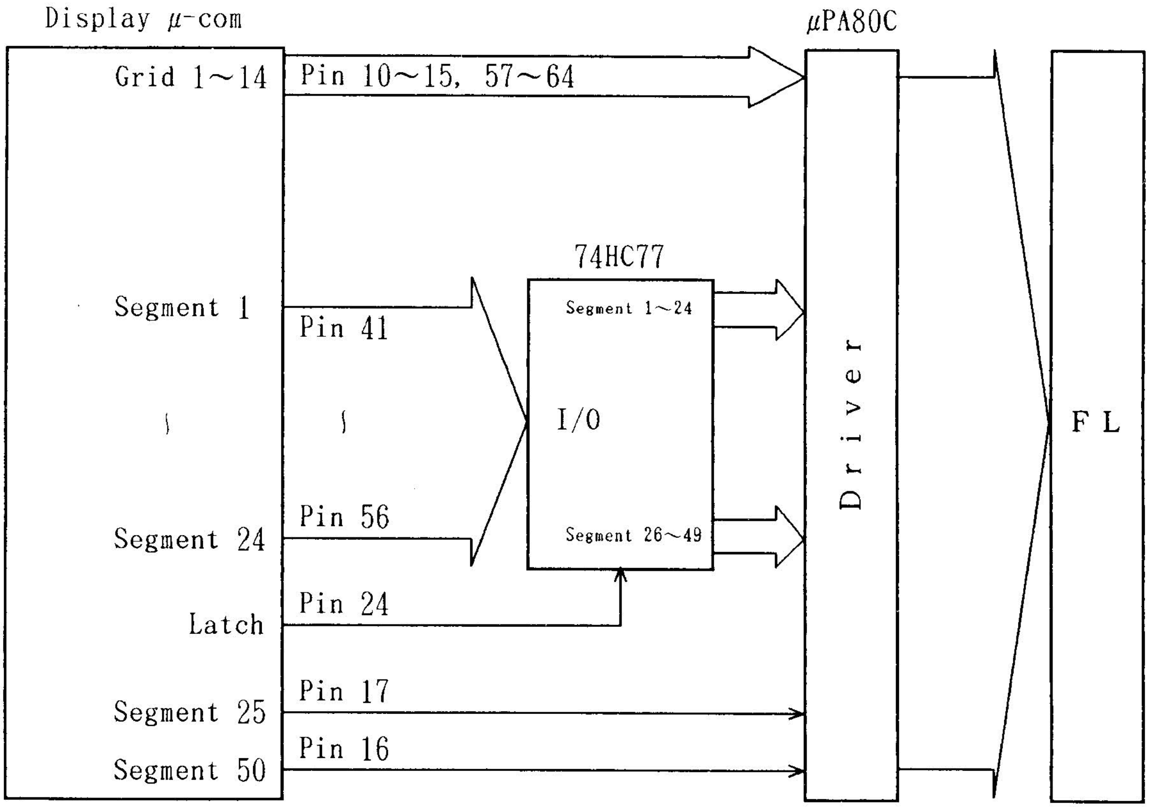
7-2. Description of terminals

Pin No.	Pin name	I/O	Name	Description
1	V_{CC}	I	5V	Power supply
2	P67	0	Segment A8	Segment
3	P66	0	Segment A7	Segment
4	P65	0	Segment A6	Segment
5	P64	0	Segment A5	Segment
6	P63	0	Segment A4	Segment
7	P62	0	Segment A3	Segment
8	P61	0	Segment A2	Segment
9	P60	0	Segment A1	Segment
10	P47	0	Grid 6	Grid
11	P46	0	Grid 5	Grid
12	P45	0	Grid 4	Grid
13	P44	0	Grid 3	Grid
14	P43	0	Grid 2	Grid
15	P42	0	Grid 1	Grid
16	P41	0	Segment A50	Segment
17	P40	0	Segment A25	Segment
18	P37	0	$\overline{\text{RDY}}$	Serial $\overline{\text{RDY}}$
19	P36	I	CLK	Serial CLK
20	P35	0	SYNC	Serial SYNC
21	P34	I	DATA	Serial DATA
22	P33	I	BUSY	Serial BUSY
23	P32	I	$\overline{\text{CE}}$	Chip inable
24	P31	0	LATCH OUT	74HC77 latch control
25	P30	0	Segment C3	Segment
26	$\overline{\text{INT1}}$	0	$\overline{\text{CE}}$	Chip inable
27	CNV_{SS}	I	CNV_{SS}	GND
28	$\overline{\text{RESET}}$	I	$\overline{\text{RESET}}$	$\overline{\text{RESET}}$
29	X_{IN}	I	X_{IN}	Clock
30	X_{OUT}	0	X_{OUT}	Clock
31	ϕ	0	ϕ	Timing signal ϕ output
32	V_{SS}	I	V_{SS}	GND

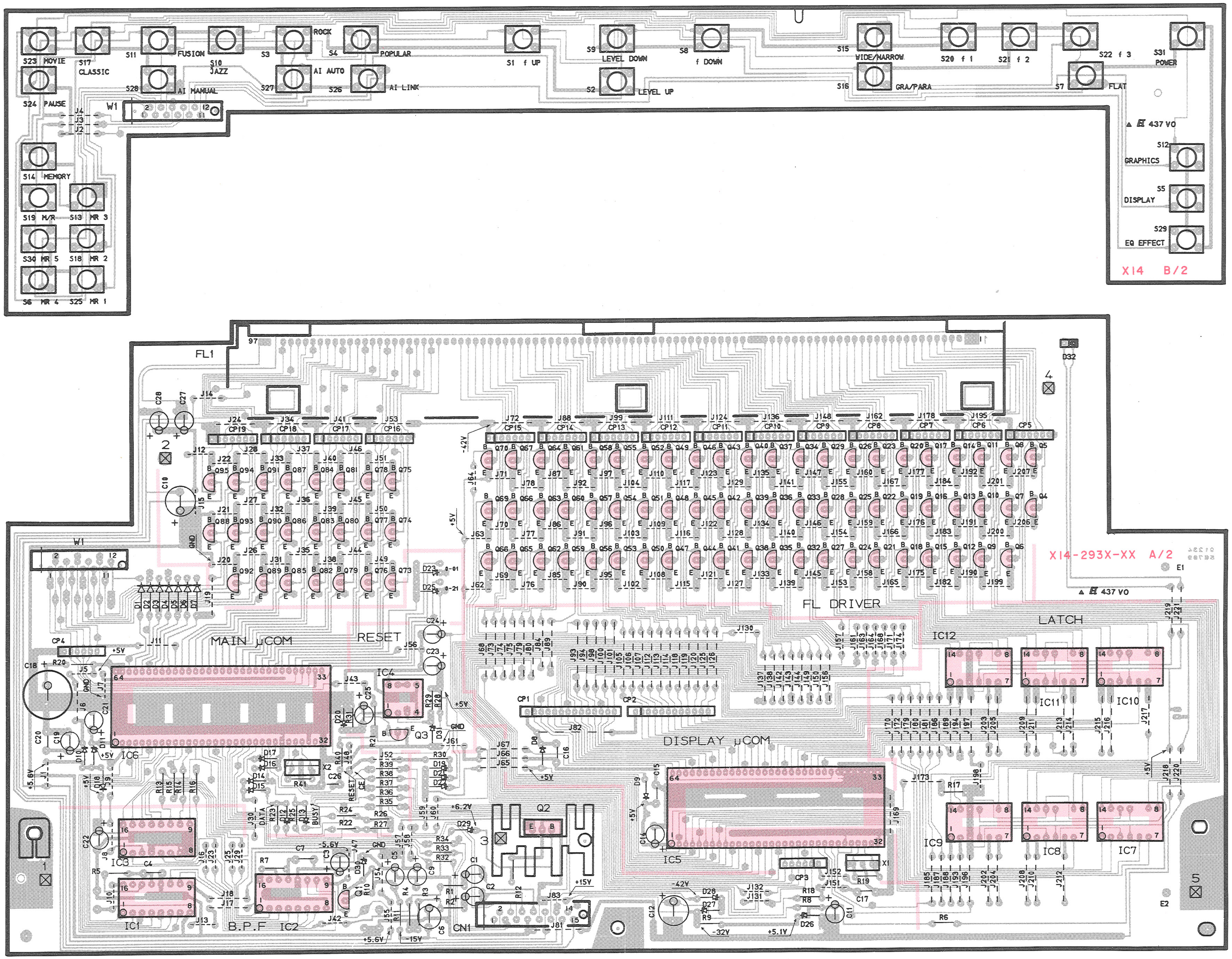
Pin No.	Pin name	I/O	Name	Description
33	P57	I	P57	GND
34	P56	I	P56	GND
35	P55	I	P55	GND
36	P54	I	P54	GND
37	P53	I	P53	GND
38	P52	I	P52	GND
39	P51	I	P51	GND
40	P50	I	Invert	Display invert input
41	P17	0	Segment A24	Segment
42	P16	0	Segment A23	Segment
43	P15	0	Segment A22	Segment
44	P14	0	Segment A21	Segment
45	P13	0	Segment A20	Segment
46	P12	0	Segment A19	Segment
47	P11	0	Segment A18	Segment
48	P10	0	Segment A17	Segment
49	P07	0	Segment A16	Segment
50	P06	0	Segment A15	Segment
51	P05	0	Segment A14	Segment
52	P04	0	Segment A13	Segment
53	P03	0	Segment A12	Segment
54	P02	0	Segment A11	Segment
55	P01	0	Segment A10	Segment
56	P00	0	Segment A9	Segment
57	P27	0	Grid 14	Grid
58	P26	0	Grid 13	Grid
59	P25	0	Grid 12	Grid
60	P24	0	Grid 11	Grid
61	P23	0	Grid 10	Grid
62	P22	0	Grid 9	Grid
63	P21	0	Grid 8	Grid
64	P20	0	Grid 7	Grid

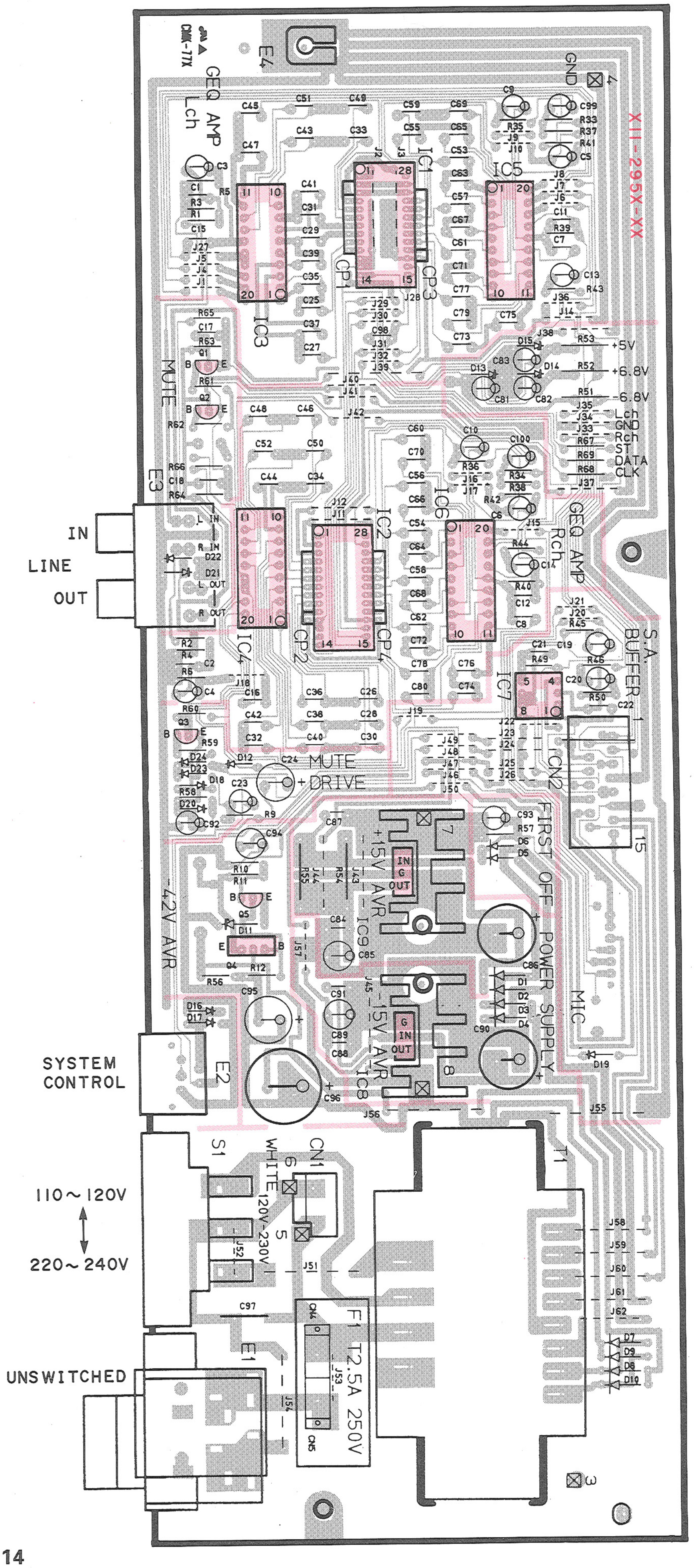
CIRCUIT DESCRIPTION

8. Display Tube Driving Condition


Display μ-com
Grid 1～14
Pin 10～15, 57～64
μPA80C
74HC77
Segment 1
Pin 41
Segment 1～24
I/O
Segment 24
Pin 56
Segment 26～49
Latch
Pin 24
Segment 25
Pin 17
Segment 50
Pin 16
Driver
F L

PC BOARD (COMPONENT SIDE VIEW)

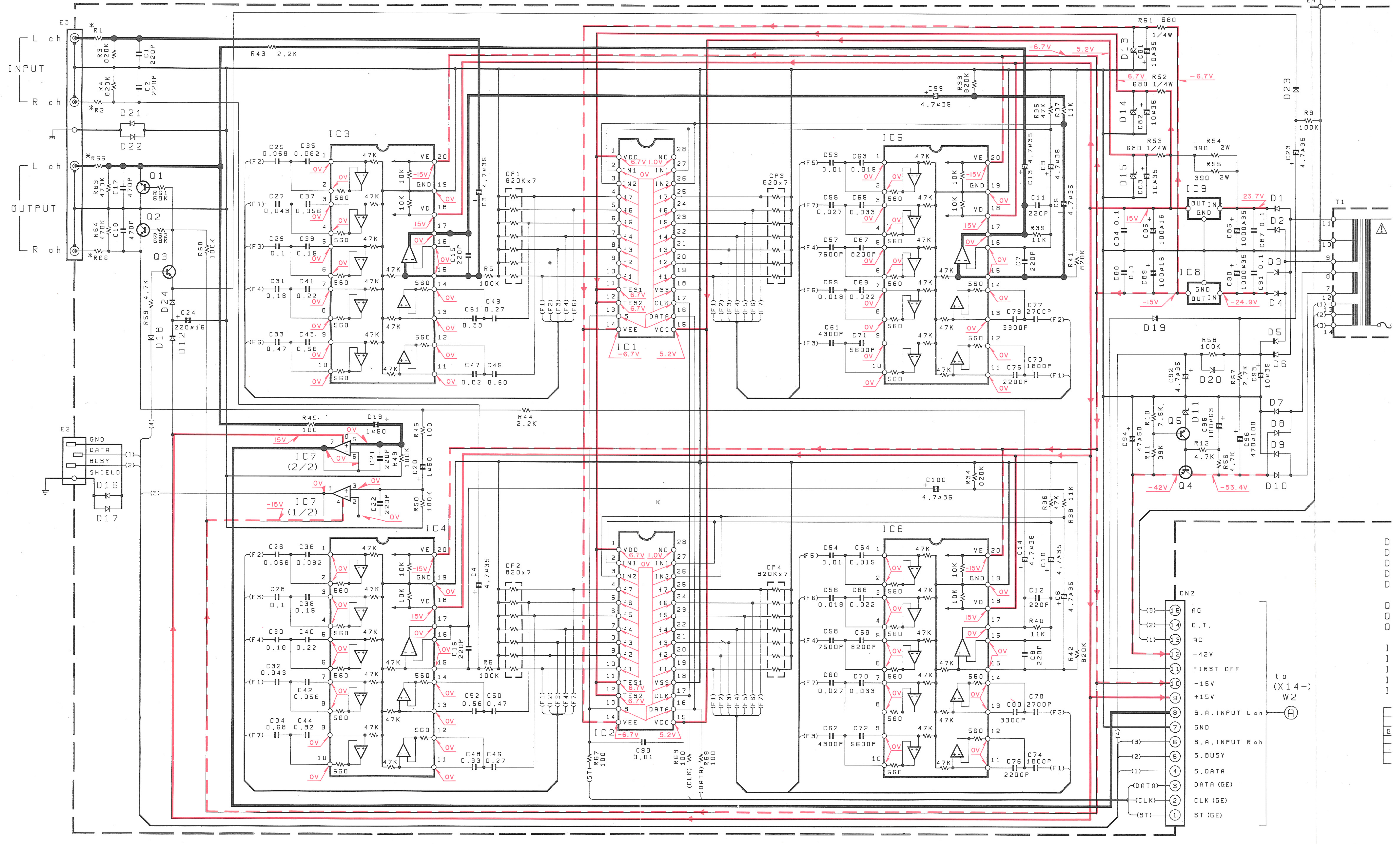

S23 MOVIE
S17 CLASSIC
S11
FUSION
S10 JAZZ
S3
ROCK
S4 POPULAR
S28 AI MANUAL
S27 AI AUTO
S26 AI LINK
S1 f UP
S9 LEVEL DOWN
S8 f DOWN
S2 LEVEL UP
S15 WIDE/NARROW
S16 GRA/PARA
S20 f 1
S21 f 2
S22 f 3
S7 FLAT
S31 POWER
S24 PAUSE
W1
S14 MEMORY
S19 M/R
S13 MR 3
S30 MR 5
S18 MR 2
S6 MR 4
S25 MR 1
437 VO
S12 GRAPHICS
S5 DISPLAY
S29 EQ EFFECT
X14 B/2
FL1
X14-293X-XX A/2
FL DRIVER
LATCH
MAIN μCOM
RESET
DISPLAY μCOM
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
B.P.F
Q2
Q3
CN1
CP1
CP2
CP3
CP4
-42V
-32V
+5V
+15V
-15V
+5.6V
-5.6V
+6.2V
+5.1V
GND
E1
E2

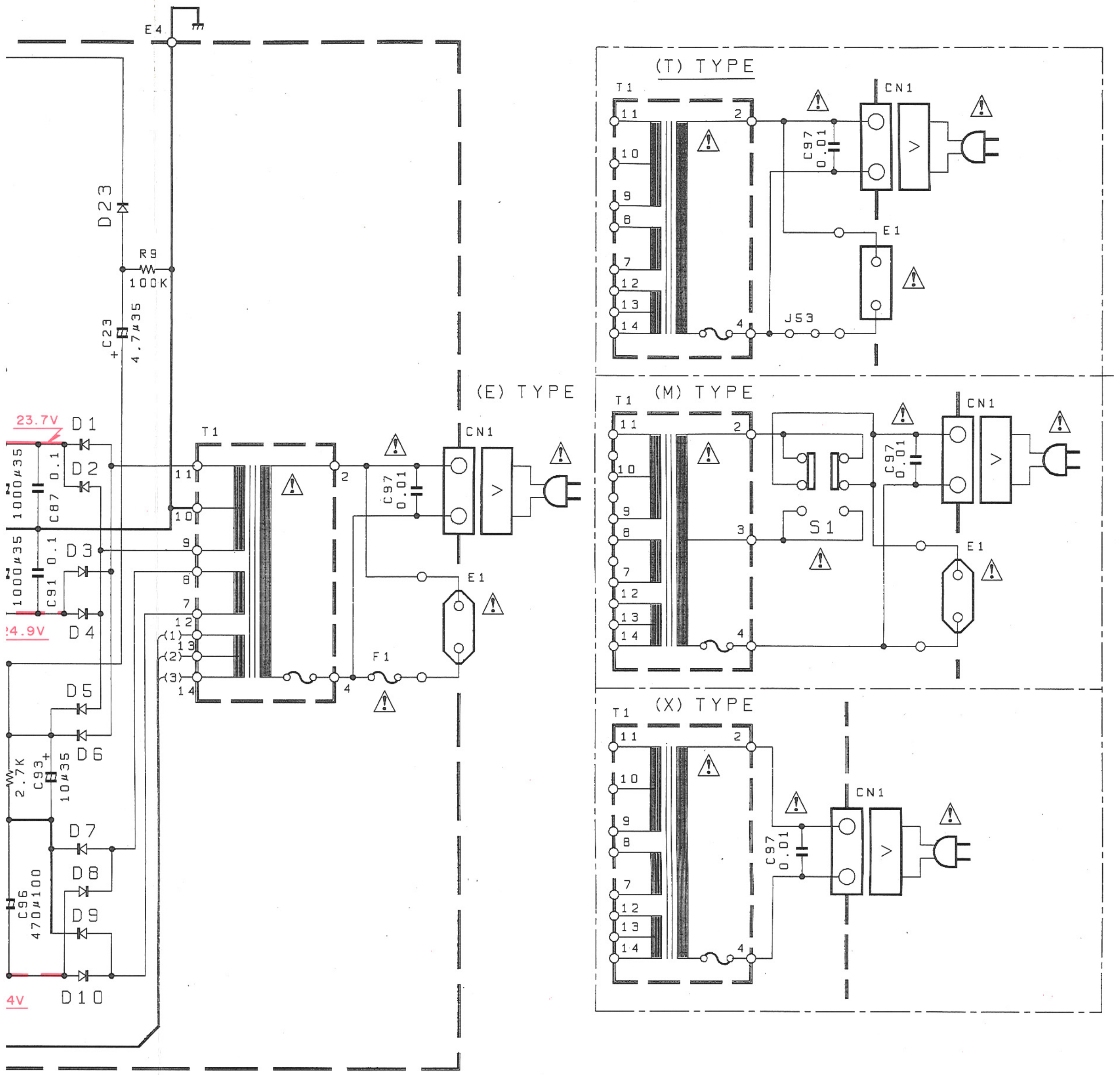


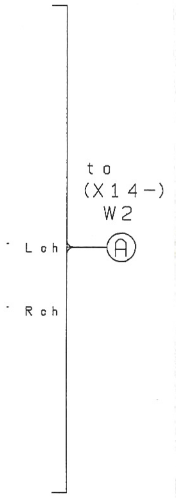
GEQ AMP Lch
GEQ AMP Rch
CNMK-7TX
E4
GND
XII-295X-XX
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
CP1
CP2
CP3
CP4
MUTE
MUTE DRIVE
+5V
+6.8V
-6.8V
Lch
GND
Rch
ST
DATA
CLK
E3
IN
LINE
OUT
S.A. BUFFER
CN2
FIRST OFF POWER SUPPLY
MIC
+15V AVR
-15V AVR
-42V AVR
IN
G
OUT
SYSTEM CONTROL
E2
S1
CN1
WHITE
120V-230V
T1
110～120V
220～240V
F1 T2.5A 250V
E1
UNSWITCHED

Refer to the schematic diagram for the values of resistors and capacitors.

CONTROL UNIT
(X11-2952-71)


INPUT
L ch
R ch
OUTPUT
L ch
R ch
E3
E2
E4
GND
DATA
BUSY
SHIELD
R1
R2
R3 820K
R4 820K
C1 220P
C2 220P
D21
D22
R65
R66
Q1
Q2
Q3
R63 470K
R64 470K
C17 470P
C18 470P
R59 4.7K
D24
D18
D12
C24 220μ16
R60 100K
R43 2.2K
R44 2.2K
R45 100
R46 100
C19 1μ50
C20 1μ50
R49 100K
R50 100K
C21 220P
C22 220P
IC7 (2/2)
IC7 (1/2)
D16
D17
IC3
IC4
IC5
IC6
IC1
IC2
IC8
IC9
CP1 820K×7
CP2 820K×7
CP3 820K×7
CP4 820K×7
VDD
NC
IN1
IN2
TES1
TES2
VSS
CLK
DATA
VEE
VCC
f1
f2
f3
f4
f5
f6
f7
VE
GND
VD
47K
10K
560
R5 100K
R6 100K
C3 4.7μ35
C4 4.7μ35
C15 220P
C16 220P
C25 0.068
C35 0.082
C27 0.043
C37 0.056
C29 0.1
C39 0.15
C31 0.18
C41 0.22
C33 0.47
C43 0.56
C49 0.27
C51 0.33
C47 0.82
C45 0.68
C26 0.068
C36 0.082
C28 0.1
C38 0.15
C30 0.18
C40 0.22
C32 0.043
C42 0.056
C34 0.68
C44 0.82
C48 0.33
C46 0.27
C52 0.56
C50 0.47
C98 0.01
R67 100
R68 100
R69 100
C99 4.7μ35
C100 4.7μ35
R33 820K
R34 820K
R35 47K
R36 47K
R37 11K
R38 11K
R39 11K
R40 11K
R41 820K
R42 820K
C9 4.7μ35
C10 4.7μ35
C13 4.7μ35
C14 4.7μ35
C5 4.7μ35
C6 4.7μ35
C11 220P
C12 220P
C7 220P
C8 220P
C53 0.01
C63 0.015
C55 0.027
C65 0.033
C57 7500P
C67 8200P
C59 0.018
C69 0.022
C61 4300P
C71 5600P
C77 2700P
C79 3300P
C73 1800P
C75 2200P
C54 0.01
C64 0.015
C56 0.018
C66 0.022
C58 7500P
C68 8200P
C60 0.027
C70 0.033
C62 4300P
C72 5600P
C78 2700P
C80 3300P
C74 1800P
C76 2200P
R51 680 1/4W
R52 680 1/4W
R53 680 1/4W
R54 390 2W
R55 390 2W
R9 100K
C23 4.7μ35
C81 10μ35
C82 10μ35
C83 10μ35
C84 0.1
C85 100μ16
C86 1000μ35
C87 0.1
C88 0.1
C89 100μ16
C90 1000μ35
C91 0.1
D13
D14
D15
D23
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D19
D20
OUT IN GND
GND OUT IN
T1
R58 100K
R57 2.7K
C92 4.7μ35
C93 10μ35
R10 7.5K
R11 39K
R12 4.7K
R56 4.7K
C94 47μ50
C95 100μ63
C96 470μ100
Q4
Q5
CN2
AC
C.T.
AC
-42V
FIRST OFF
-15V
+15V
S.A.INPUT L ch
GND
S.A.INPUT R ch
S.BUSY
S.DATA
DATA (GE)
CLK (GE)
ST (GE)
to (X14-) W2
Ⓐ
0V
15V
-15V
6.7V
1.0V
-6.7V
5.2V
23.7V
-24.9V
-42V
-53.4V
K


E4
D23
R9
100K
C23
4.7µ35
23.7V
D1
D2
1000µ35
C87
0.1
D3
1000µ35
C91
0.1
24.9V
D4
D5
D6
2.7K
C93
10µ35
D7
D8
D9
C96
470µ100
4V
D10
T1
11
10
9
8
7
12
13
14
(1)
(2)
(3)
2
4
C97
0.01
CN1
E1
F1
(E) TYPE
(T) TYPE
(M) TYPE
(X) TYPE
S1
JS3


to
(X14-)
W2
Lch
Rch
A

D1~4, 7~10 :S5566B
D5, 6, 12, 16~24 :HSS104A or 1SS131
D11 :RD6.2ES (B2) or HZS6.2N (B2)
D13, 14 :RD6.8ES (B2) or HZS6.8N (B2)
D15 :RD5.1ES (B2) or HZS5.1N (B2)

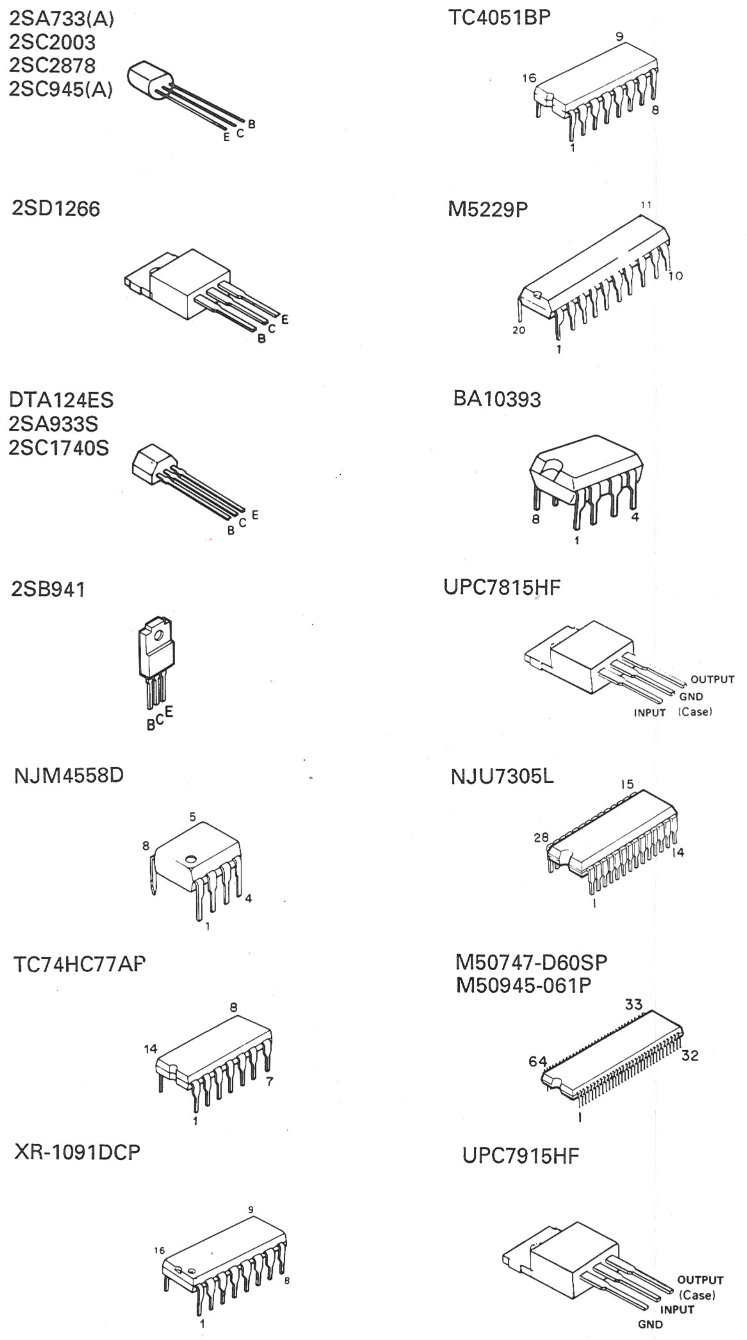
Q1, 2 :2SC2878 (B)
Q3, 5 :2SA733 (A) (Q, P) or 2SA933S (Q, R)
Q4 :2SB941

IC1, 2 :NJU7305L
IC3~6 :M5229P
IC7 :NJM4558D
IC8 :µPC7915HF
IC9 :µPC7815HF

DESTINATION		UNIT NAME	R1, 2	R65, 66
COUNTRY	ABB			
GENERAL MARKET	M	X11-2950-21	100	100
ENGLAND	T	X11-2950-51		
AUSTRALIA	X	X11-2950-71		
EUROPE	E	X11-2952-71	470	1.5K

━━━ SIGNAL LINE
─── GND LINE
🟥 +B LINE
– – – –B LINE

GE-940(E)(1/2)


2SA733(A)
2SC2003
2SC2878
2SC945(A)
E C B
TC4051BP
16
9
8
1
2SD1266
E C B
M5229P
11
20
10
1
DTA124ES
2SA933S
2SC1740S
B C E
BA10393
8
4
1
2SB941
B C E
UPC7815HF
OUTPUT
GND
INPUT (Case)
NJM4558D
5
8
4
1
NJU7305L
15
28
14
1
TC74HC77AP
8
14
7
1
M50747-D60SP
M50945-061P
33
64
32
1
XR-1091DCP
9
16
8
1
UPC7915HF
OUTPUT
(Case)
INPUT
GND

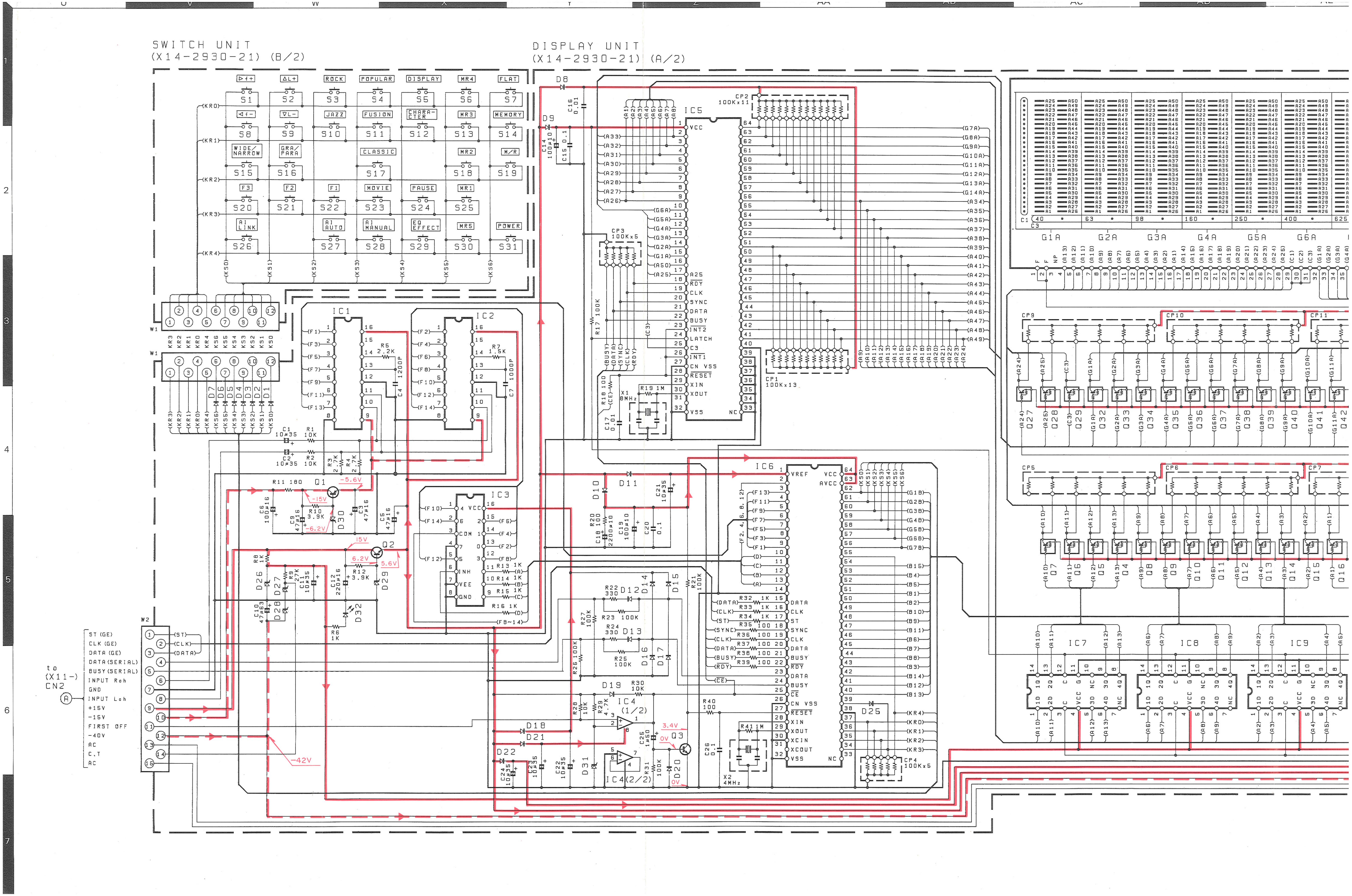
CAUTION : For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

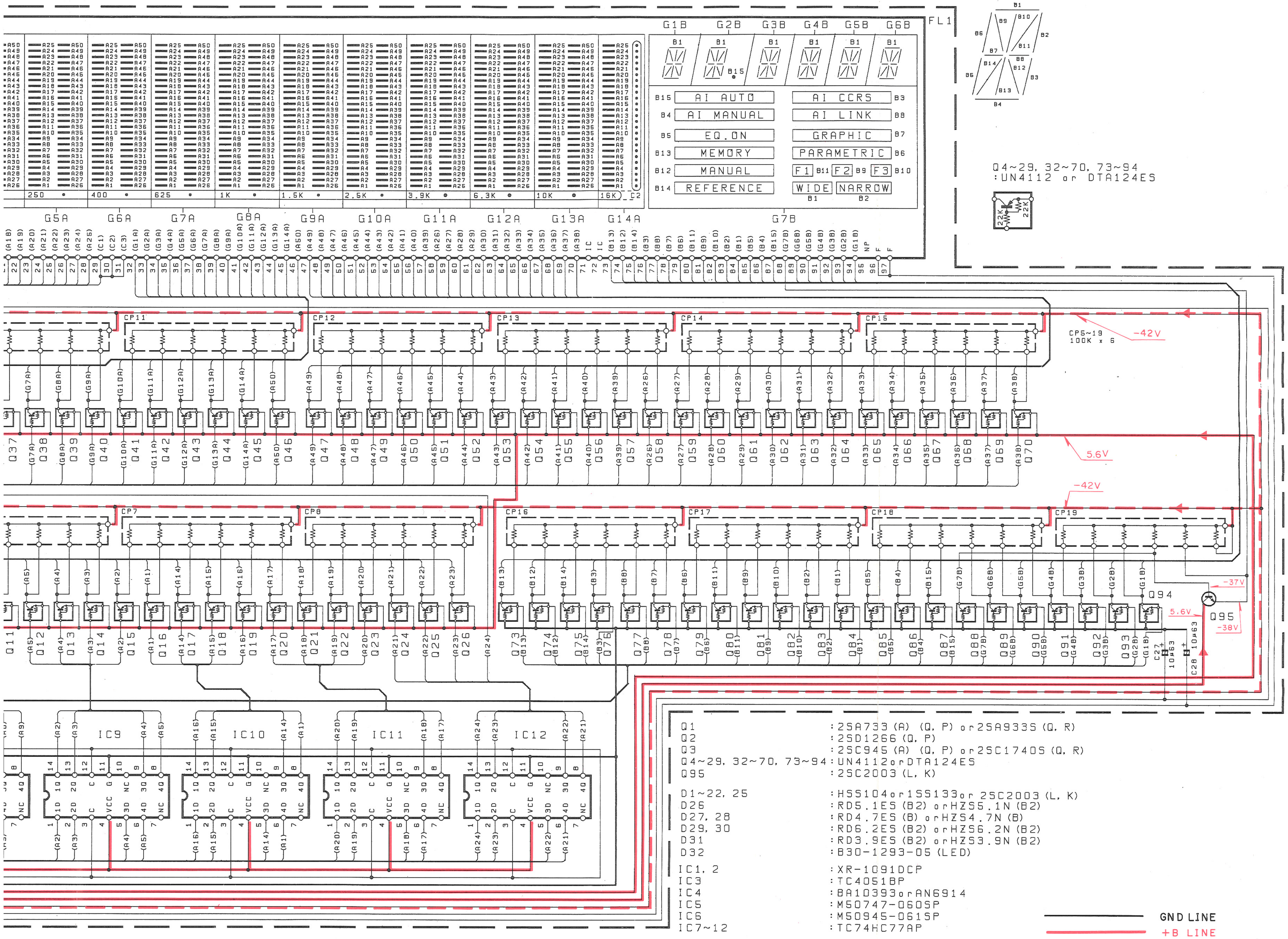
- DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Y09-3510-21

GE-940

KENWOOD


SWITCH UNIT
(X14-2930-21) (B/2)
DISPLAY UNIT
(X14-2930-21) (A/2)
S1 S2 S3 S4 S5 S6 S7
S8 S9 S10 S11 S12 S13 S14
S15 S16 S17 S18 S19
S20 S21 S22 S23 S24 S25
S26 S27 S28 S29 S30 S31
ROCK
POPULAR
DISPLAY
MR4
FLAT
JAZZ
FUSION
CHARA-CTER
MR3
MEMORY
WIDE/NARROW
GRA/PARA
CLASSIC
MR2
M/R
F3 F2 F1
MOVIE
PAUSE
MR1
AI LINK
AI AUTO
AI MANUAL
EQ EFFECT
MR5
POWER
IC1 IC2 IC3 IC5 IC6 IC7 IC8 IC9
IC4 (1/2)
IC4 (2/2)
Q1 Q2 Q3
CP1 100K×13
CP2 100K×11
CP3 100K×5
CP4 100K×5
CP5 CP6 CP7 CP9 CP10 CP11
X1 8MHz
X2 4MHz
W1
W2
to (X11-) CN2
ST (GE)
CLK (GE)
DATA (GE)
DATA (SERIAL)
BUSY (SERIAL)
INPUT Rch
GND
INPUT Lch
+15V
-15V
FIRST OFF
-40V
AC
C.T
AC
-5.6V
-15V
-6.2V
15V
6.2V
5.6V
-42V
3.4V
0V
0V
G1A G2A G3A G4A G5A G6A


FL1
G1B G2B G3B G4B G5B G6B
AI AUTO
AI CCRS
AI MANUAL
AI LINK
EQ.ON
GRAPHIC
MEMORY
PARAMETRIC
MANUAL
F1 F2 F3
REFERENCE
WIDE NARROW
250 400 625 1K 1.5K 2.5K 3.9K 6.3K 10K 16K
G5A G6A G7A G8A G9A G10A G11A G12A G13A G14A G7B
Q4~29, 32~70, 73~94 :UN4112 or DTA124ES
22K 22K
CP7 CP8 CP11 CP12 CP13 CP14 CP15 CP16 CP17 CP18 CP19
CP5~19 100K x 6
-42V
5.6V
-42V
-37V
5.6V
-38V
Q94
Q95
C27 10μ63
C28 10μ63
IC9 IC10 IC11 IC12

Q1 :2SA733 (A) (Q, P) or2SA933S (Q, R)
Q2 :2SD1266 (Q, P)
Q3 :2SC945 (A) (Q, P) or2SC1740S (Q, R)
Q4~29, 32~70, 73~94 :UN4112orDTA124ES
Q95 :2SC2003 (L, K)

D1~22, 25 :HSS104or1SS133or 2SC2003 (L, K)
D26 :RD5.1ES (B2) orHZS5.1N (B2)
D27, 28 :RD4.7ES (B) orHZS4.7N (B)
D29, 30 :RD6.2ES (B2) orHZS6.2N (B2)
D31 :RD3.9ES (B2) orHZS3.9N (B2)
D32 :B30-1293-05 (LED)

IC1, 2 :XR-1091DCP
IC3 :TC4051BP
IC4 :BA10393orAN6914
IC5 :M50747-060SP
IC6 :M50945-061SP
IC7~12 :TC74HC77AP

FL1 :FIP21BMW24

GND LINE
+B LINE
−B LINE

CAUTION : For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

- DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

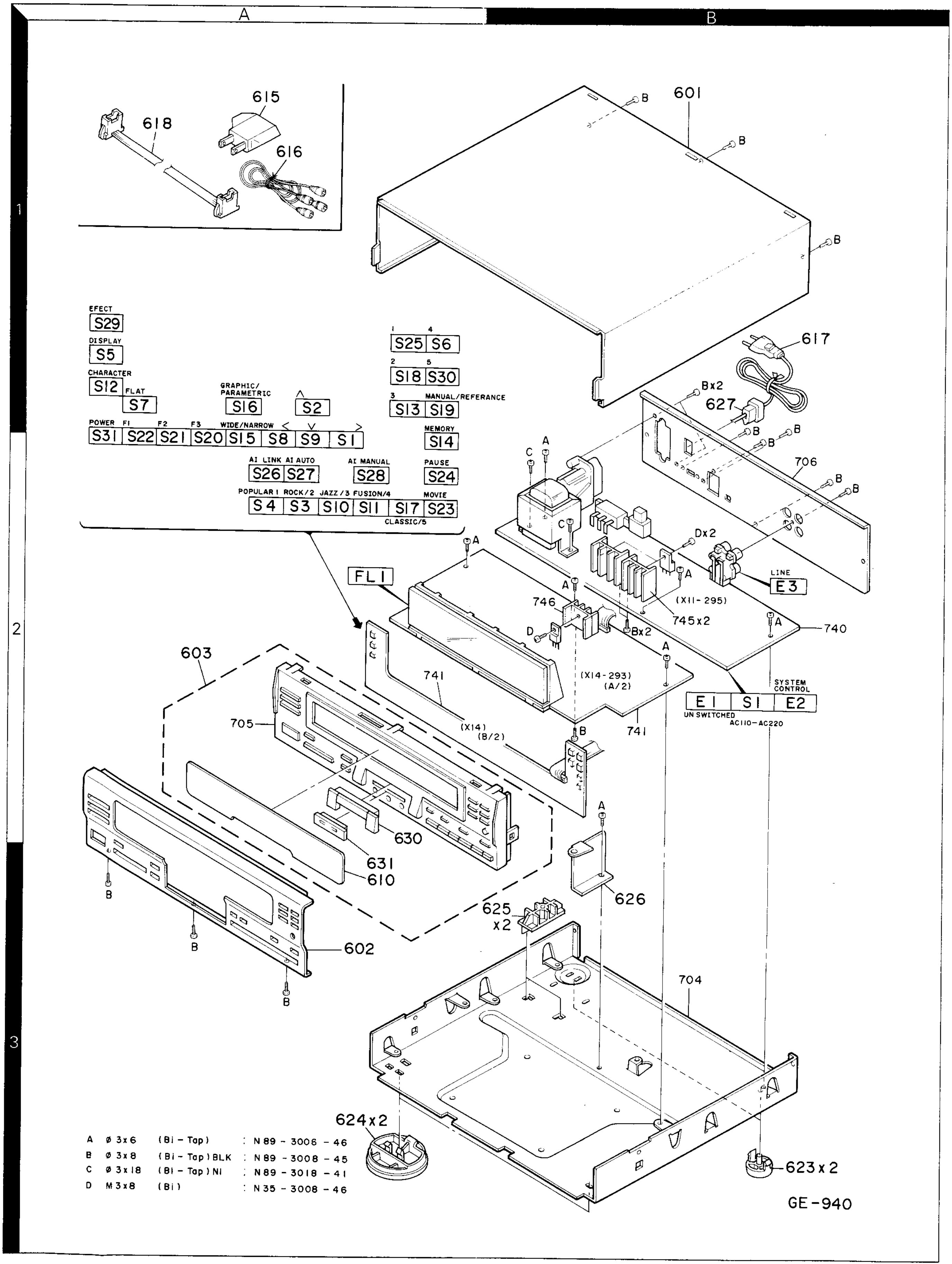
GE-940(E)(2/2)

Y09-3510-21

GE-940

KENWOOD

EXPLODED VIEW


A
B
1
2
3
615
618
616
601
B
B
B
EFECT
S29
DISPLAY
S5
CHARACTER
S12
FLAT
S7
GRAPHIC/
PARAMETRIC
S16
S2
POWER
F1
F2
F3
WIDE/NARROW
S31
S22
S21
S20
S15
S8
S9
S1
AI LINK
AI AUTO
S26
S27
AI MANUAL
S28
POPULAR 1
ROCK/2
JAZZ/3
FUSION/4
S4
S3
S10
S11
S17
CLASSIC/5
1
4
S25
S6
2
5
S18
S30
3
MANUAL/REFERANCE
S13
S19
MEMORY
S14
PAUSE
S24
MOVIE
S23
617
Bx2
627
B
B
B
706
B
B
C
A
C
Dx2
A
LINE
E3
FL1
A
A
746
(X11-295)
745x2
D
Bx2
A
740
A
603
741
(X14-293)
(A/2)
SYSTEM
CONTROL
E1
S1
E2
UN SWITCHED
AC110-AC220
705
(X14)
(B/2)
B
741
A
630
631
610
626
B
625
x2
B
602
B
704
624x2
623x2
GE-940

A	ø 3x6	(Bi - Tap)	: N89 - 3006 - 46
B	ø 3x8	(Bi - Tap) BLK	: N89 - 3008 - 45
C	ø 3x18	(Bi - Tap) Ni	: N89 - 3018 - 41
D	M3x8	(Bi)	: N35 - 3008 - 46

Parts with the exploded numbers larger than 700 are not supplied.

GE-940

PARTS LIST

⁎ New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
				GE-940		
601	1B	⁎	A01-1876-01	METALLIC CABINET		
602	3A	⁎	A20-6096-02	PANEL		
603	2A	⁎	A22-1431-02	SUB PANEL ASSY		
610	3A	⁎	B10-1826-03	FRONT GLASS		
-			B44-6006-04	POS LABEL		
-			B46-0122-13	WARRANTY CARD	E	
-			B46-0143-13	WARRANTY CARD	T	
-			B58-0803-13	CAUTION CARD	X	
-		⁎	B60-0193-00	INSTRUCTION MANUAL(ENGLISH)		
-		⁎	B60-0194-00	INSTRUCTION MANUAL(F/G/D/I)	E	
-		⁎	B60-0195-00	INSTRUCTION MANUAL(SP/CH)	M	
⚠ 615	1A		E03-0115-05	AC PLUG ADAPTER	M	
616	1A		E30-0505-05	AUDIO CORD		
⚠ 617	1B		E30-2592-15	AC POWER CORD	ME	
⚠ 617	1B		E30-2594-15	AC POWER CORD	X	
⚠ 617	1B	⁎	E30-2602-05	AC POWER CORD	T	
618	1A		E30-2628-05	CORD WITH CONNECTOR		
-		⁎	H01-8839-04	ITEM CARTON CASE		
-		⁎	H10-5045-02	POLYSTYRENE FOAMED FIXTURE		
-			H25-0224-04	PROTECTION BAG (800X400X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
623	3B		J02-0370-05	FOOT		
624	3A		J02-1040-05	FOOT		
625	3B	⁎	J19-3314-04	HOLDER		
626	3B	⁎	J21-5637-04	MOUNTING HARDWARE		
⚠ 627	1B		J42-0083-05	POWER CORD BUSHING		
630	2A	⁎	K29-3991-03	KNOB		
631	2A,3A	⁎	K29-3992-04	KNOB		
A			N89-3006-46	BINDING HEAD TAPTITE SCREW		
B			N89-3008-45	BINDING HEAD TAPTITE SCREW		
C			N89-3018-41	BINDING HEAD TAPTITE SCREW		
				TONE (X11-2950-21)		
C1 ,2			CC45FSL1H221J	CERAMIC 220PF J		
C3 -6			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C7 ,8			CC45FSL1H221J	CERAMIC 220PF J		
C9 ,10			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C11 ,12			CC45FSL1H221J	CERAMIC 220PF J		
C13 ,14			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C15 ,16			CC45FSL1H221J	CERAMIC 220PF J		
C17 ,18			CK45FB1H471K	CERAMIC 470PF K		
C19 ,20			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C21 ,22			CC45FSL1H221J	CERAMIC 220PF J		
C23			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C24			CE04KW1C221M	ELECTRO 220UF 16WV		
C25 ,26			CF92FV1H683J	MF 0.068UF J		
C27			CF92FV1H433J	MF 0.043UF J		
C28 ,29			CF92FV1H104J	MF 0.10UF J		
C30 ,31			CF92FV1H184J	MF 0.18UF J		
C32			CF92FV1H433J	MF 0.043UF J		
C33			CF92FV1H474J	MF 0.47UF J		
C34			CF92FV1H684J	MF 0.68UF J		

E: Scandinavia & Europe K: USA P: Canada W:Europe
Y : PX(Far East, Hawaii) T: England M: Other Areas
Y : AAFES(Europe) X: Australia

⚠ indicates safety critical components.

PARTS LIST

⁎ New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
C35 ,36			CF92FV1H823J	MF 0.082UF J		
C37			CF92FV1H563J	MF 0.056UF J		
C38 ,39			CF92FV1H154J	MF 0.15UF J		
C40 ,41			CF92FV1H224J	MF 0.22UF J		
C42			CF92FV1H563J	MF 0.056UF J		
C43			CF92FV1H564J	MF 0.56UF J		
C44			CF92FV1H824J	MF 0.82UF J		
C45			CF92FV1H684J	MF 0.68UF J		
C46			CF92FV1H274J	MF 0.27UF J		
C47			CF92FV1H824J	MF 0.82UF J		
C48			CF92FV1H334J	MF 0.33UF J		
C49			CF92FV1H274J	MF 0.27UF J		
C50			CF92FV1H474J	MF 0.47UF J		
C51			CF92FV1H334J	MF 0.33UF J		
C52			CF92FV1H564J	MF 0.56UF J		
C53 ,54			C91-0676-05	CERAMIC 0.01UF K		
C55			CF92FV1H273J	MF 0.027UF J		
C56			C91-0682-05	CERAMIC 0.018UF K		
C57 ,58			CF92FV1H752J	MF 7500PF J		
C59			C91-0682-05	CERAMIC 0.018UF K		
C60			CF92FV1H273J	MF 0.027UF J		
C61 ,62			CF92FV1H432J	MF 4300PF J		
C63 ,64			C91-0680-05	CERAMIC 0.015UF K		
C65			CF92FV1H333J	MF 0.033UF J		
C66			C91-0684-05	CERAMIC 0.022UF K		
C67 ,68			CF92FV1H822J	MF 8200PF J		
C69			C91-0684-05	CERAMIC 0.022UF K		
C70			CF92FV1H333J	MF 0.033UF J		
C71 ,72			CF92FV1H562J	MF 5600PF J		
C73 ,74			C91-0658-05	CERAMIC 0.0018UF K		
C75 ,76			C91-0660-05	CERAMIC 0.0022UF K		
C77 ,78			C91-0662-05	CERAMIC 0.0027UF K		
C79 ,80			C91-0664-05	CERAMIC 0.0033UF K		
C81 -83			CE04KW1V100M	ELECTRO 10UF 35WV		
C84			CF92FV1H104J	MF 0.10UF J		
C85			CE04KW1C101M	ELECTRO 100UF 16WV		
C86			CE04KW1V102M	ELECTRO 1000UF 35WV		
C87 ,88			CF92FV1H104J	MF 0.10UF J		
C89			CE04KW1C101M	ELECTRO 100UF 16WV		
C90			CE04KW1V102M	ELECTRO 1000UF 35WV		
C91			CF92FV1H104J	MF 0.10UF J		
C92			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C93			CE04KW1V100M	ELECTRO 10UF 35WV		
C94			CE04KW1H470M	ELECTRO 47UF 50WV		
C95			CE04DW1J101M	ELECTRO 100UF 63WV		
C96			CE04KW2A471M	ELECTRO 470UF 100WV		
⚠ C97			C91-0647-05	CERAMIC 0.01UF P		
C98			CK45FF1H103Z	CERAMIC 0.010UF Z		
C99 ,100			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
⚠ E1			E03-0108-05	AC OUTLET	ME	
⚠ E1			E03-0109-05	AC OUTLET	T	
E2			E08-0312-05	RECTANGULAR RECEPTACLE		
E2			E13-0446-05	PHONO JACK (4P)		
⚠ F1			F05-2525-05	FUSE (SEMKO) (250V T2.5A)	E	

E: Scandinavia & Europe K: USA P: Canada W: Europe
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⚠ indicates safety critical components

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PARTS LIST

⁎ New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
CN4 ,5			J13-0075-05	FUSE CLIP	E	
⚠ T1		*	L07-0184-05	POWER TRANSFORMER	M	
⚠ T1		*	L07-0185-05	POWER TRANSFORMER	TXE	
B			N89-3008-45	BINDING HEAD TAPTITE SCREW		
D			N35-3008-46	BINDING HEAD MACHINE SCREW		
CP1 -4			R90-0491-05	MULTI-COMP 820KX7 J 1/6W		
R51 -53			RD14NB2E681J	RD 680 J 1/4W		
R54 ,55			RS14KB3D391J	FL-PROOF RS 390 J 2W		
⚠ S1			S31-2131-05	SLIDE SWITCH (POWER TYPE)	M	
D1 -4			S5566B	DIODE		
D5 ,6			HSS104A	DIODE		
D5 ,6			1SS131	DIODE		
D7 -10			S5566B	DIODE		
D11			HZS6.2N(B2)	ZENER DIODE		
D11			RD6.2ES(B2)	ZENER DIODE		
D12			HSS104A	DIODE		
D12			1SS131	DIODE		
D13 ,14			HZS6.8N(B2)	ZENER DIODE		
D13 ,14			RD6.8ES(B2)	ZENER DIODE		
D15			HZS5.1N(B2)	ZENER DIODE		
D15			RD5.1ES(B2)	ZENER DIODE		
D16 -24			HSS104A	DIODE		
D16 -24			1SS131	DIODE		
IC1 ,2			NJU7305L	IC(DUAL 4-CHANNEL MULTIPLEXER)		
IC3 -6			M5229P	IC(7CH GRAPHIC EQUALIZER)		
IC7			NJM4558D	IC(OP AMP X2)		
IC8			UPC7915HF	IC(VOLTAGE REGULATOR/ -15V)		
IC9			UPC7815HF	IC(VOLTAGE REGULATOR/ +15V)		
Q1 ,2			2SC2878(B)	TRANSISTOR		
Q3			2SA733(A)(Q,P)	TRANSISTOR		
Q3			2SA933S(Q,R)	TRANSISTOR		
Q4			2SB941	TRANSISTOR		
Q5			2SA733(A)(Q,P)	TRANSISTOR		
Q5			2SA933S(Q,R)	TRANSISTOR		
DISPLAY (X14-2930-21)						
D32		*	B30-1293-05	LED		
C1 ,2			CE04KW1V100M	ELECTRO 10UF 35WV		
C3			CE04KW1C470M	ELECTRO 47UF 16WV		
C4			CF92FV1H122J	MF 1200PF J		
C5			CE04KW1C470M	ELECTRO 47UF 16WV		
C6			CE04KW1C101M	ELECTRO 100UF 16WV		
C7			CF92FV1H102J	MF 1000PF J		
C9			CE04KW1C470M	ELECTRO 47UF 16WV		
C10			CE04KW1J470M	ELECTRO 47UF 63WV		
C11			CE04KW1V100M	ELECTRO 10UF 35WV		
C12			CE04KW1C221M	ELECTRO 220UF 16WV		
C14			CE04KW1A101M	ELECTRO 100UF 10WV		
C15			CF92FV1H104J	MF 0.10UF J		
C16 ,17			CF92FV1H103J	MF 0.010UF J		
C18			CE04KW1A222M	ELECTRO 2200UF 10WV		
C19			CE04KW1A101M	ELECTRO 100UF 10WV		

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PARTS LIST

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Desti-nation 仕向	Re-marks 備考
C20			CF92FV1H104J	MF 0.10UF J		
C21 -24			CE04KW1V100M	ELECTRO 10UF 35WV		
C25			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C26			CF92FV1H104J	MF 0.10UF J		
C27 ,28			CE04KW1J100M	ELECTRO 10UF 63WV		
X1			L78-0275-05	RESONATOR		
X2			L78-0244-05	RESONATOR		
CP1			R90-0483-05	MULTI-COMP 100KX13 J 1/6W		
CP2			R90-0851-05	MULTIPLE RESISTOR		
CP3 ,4			R90-0855-05	MULTI-COMP 100KX5 J		
CP5 -19			R90-0500-05	MULTI-COMP 100KX6 J 1/4W		
S1 -31			S40-1064-05	PUSH SWITCH		
D1 -22			HSS104	DIODE		
D1 -22			1SS133	DIODE		
D25			HSS104	DIODE		
D25			1SS133	DIODE		
D26			HZS5.1N(B2)	ZENER DIODE		
D26			RD5.1ES(B2)	ZENER DIODE		
D27 ,28			HZS4.7N(B)	ZENER DIODE		
D27 ,28			RD4.7ES(B)	ZENER DIODE		
D29 ,30			HZS6.2N(B2)	ZENER DIODE		
D29 ,30			RD6.2ES(B2)	ZENER DIODE		
D31			HZS3.9N(B2)	ZENER DIODE		
D31			RD3.9ES(B2)	ZENER DIODE		
FL1		*	FIP21BMW24	FLUORESCENT INDICATOR TUBE		
IC1 ,2		*	XR-1091DCP	IC(GE DISPLAY FILTER)		
IC3			TC4051BP	IC(8CH MPX/ DE-MPX)		
IC4			AN6914	IC		
IC4			BA10393	IC(DUAL COMPALATOR)		
IC5			M50747-D60SP	IC(MICROPROCESSOR)		
IC6		*	M50945-061SP	IC		
IC7 -12			TC74HC77AP	IC(D-FFX4)		
Q1			2SA733(A)(Q,P)	TRANSISTOR		
Q1			2SA933S(Q,R)	TRANSISTOR		
Q2			2SD1266(Q,P)	TRANSISTOR		
Q3			2SC1740S(Q,R)	TRANSISTOR		
Q3			2SC945(A)(Q,P)	TRANSISTOR		
Q4 -29			DTA124ES	DIGITAL TRANSISTOR		
Q4 -29			UN4112	IC		
Q32 -70			DTA124ES	DIGITAL TRANSISTOR		
Q32 -70			UN4112	IC		
Q73 -94			DTA124ES	DIGITAL TRANSISTOR		
Q73 -94			UN4112	IC		
Q95			2SC2003(L,K)	TRANSISTOR		

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SPECIFICATIONS

Equalizer characteristic

Variable range	±12dB
Center frequencies	40Hz, 63Hz, 98Hz, 160Hz, 250Hz, 400Hz, 625Hz, 1kHz, 1.5kHz, 2.5kHz, 3.9kHz, 6.3kHz, 10kHz, 16kHz
Total harmonic distortion	Less than 0.006% (1kHz)
Maximum output voltage	9V (1kHz)
S/N ratio	100dB (IHF-A network, 1V)
Input impedance	47kΩ
Output impedance	2.2kΩ

General

Power consumption	16W
Dimensions	W 360 x H 109 x D 353 (mm)
Weight	3.4kg

Note : KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Note :
Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the Europe (E) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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